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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/482,229	01/13/2000	Raymond Rubacha	10205.023	6709

7590

01/20/2004

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EXAMINER

SINGH, RAMNANDAN P

ART UNIT PAPER NUMBER

2644

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/482,229

Applicant(s)

RUBACHA ET AL.

Examiner

Dr. Ramnandan Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Huddart et al [US 5,729,603]

Regarding Claim 12, Huddart et al teaches a telephone system shown in Figs. 1-3, comprising at least one internal switch 84; and audio conditioning circuits wherein the audio conditioning circuits provide further signal conditioning functions such as level expansion, compression, and **soft mute** [Fig. 3; col. 9, lines 16-38; col. 9, lines 8-15]. In addition, Huddart et al discloses applying a sample and hold circuit to suppress switching transients [col. 8, lines 32-45]. Inherently this sample and hold circuit in Huddart et al is a muting circuit. Boeckmann [US 4,451,706] shows using a hold circuit as merely a muting circuit [col. 1, lines 38-41].

3. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Murata et al [US 5,825,146].

Regarding Claim 5, Murata et al teaches a method for muting a signal [col. 6, lines 24-41; col. 6, lines 61-65; col. 9, lines 56-63; col. 17, lines 60-67]; the method comprising the steps of :

Increasingly attenuating a signal at a higher rate [Fig. 14; col. 19, line 64 to col. 20, line 28]; and decreasingly attenuating the signal at a lower rate [Fig. 19], [col. 21, line 59 to col. 22, line 28; col. 22, lines 45-63; col. 13, line 66 to col. 14, line 13].

Regarding Claims 6-9, the limitations are shown above.

Regarding Claims 10-11, see Figs. 14 and 19.

5. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Scheuer et al [US 6,493,450 B1].

Regarding Claim 1, Scheuer et al teaches an internal switch 134; and a mute control circuit 154, as shown in Fig. 1, implementing a "soft" muting function wherein the music audio is attenuated significantly , but is not completely muted, whenever microphone voice audio is present [col.3, line 50 to col. 4, line 55]. Inherently, the soft

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muting circuit can also suppress switching transients. Boeckmann [US 4,451,706] shows that a muting circuit can suppress switching transients [col. 1, lines 38-41].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scheuer et al as applied to Claim 12 above, and further, in view of Lipton et al [US 5,991,398].

Regarding Claim 13, Scheuer et al teaches a telephone system, shown in Fig. 1, comprising a soft muting circuit; amplifiers 140, 142; a micro-controller 302 ; and summing amplifiers 130, 132, wherein the micro-controller 302 has an internal register to store signals [col. 7, lines 23-26]. But, Scheuer et al does not disclose an amplifier having a gain control input. It may, however, be noted that an amplifier with a variable gain control is well-known in the art.

Lipton et al teaches a telephone circuit 34 comprising a variable gain amplifier [col. 3, lines 14-21].

Scheuer et al and Lipton et al are analogous art because they are from a similar problem solving area, viz. , telephonic communications.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the variable gain control of the amplifier of Lipton et al with Scheuer et al.

The suggestion/motivation for doing so would have been to provide a mechanism to control the intensity of the audible signals [Lipton et al; col. 3, lines 14-21].

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Scheuer et al and Lipton et al as applied to Claim 13 above, and further, Schillhof et al [US 6,249,158 B1].

The combination of Scheuer et al and Lipton et al does not teach expressly a summation node coupled to a signal input.

Schillhof et al teaches a muting circuit comprising an accumulation circuit 19 wherein the accumulation circuit functions as a summation node [col. 6, lines 20-27; col. 9, lines 29-53].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the summation node of to the combination of Scheuer et al and Lipton et al to maintain a high pulse density [Schillhof et al; col. 9, lines 33-36].

9. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schillhof et al [US 6,249,158 B1] in view of Lipton et al [US 5,991,398].

Regarding Claim 1, Schillhof et al teaches a circuit arrangement, as shown in Figs 1, 3, 5-6; used for volume control, tone control, soft source switching, and **soft muting circuits** [col. 6, lines 20-27; col. 18, lines 36-44; col. 20, lines 10-14]; the circuit comprising an amplifier 15; a memory register for coupled to the amplifier; and an adder circuit [col. 9, lines 39-41; col. 7, lines 29-43; col. 9, lines 8-28; col. 13, line 66 to col. 14, line 12; col. 17, lines 20-29]. But, does not disclose an amplifier having a gain control input. It may, however, be noted that an amplifier with a variable gain control is well-known in the art.

Lipton et al teaches a telephone circuit 34 comprising a variable gain amplifier [col. 3, lines 14-21].

Schillhof et al and Lipton et al are analogous art because they are from a similar problem solving area, viz. , telephonic communications.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the variable gain control of the amplifier of Lipton et al with Scheuer et al.

The suggestion/motivation for doing so would have been to provide a mechanism to control the intensity of the audible signals [Lipton et al; col. 3, lines 14-21].

Regarding Claim 2, see Fig. 3 [col. 9, lines 29-53].

Regarding Claim 3, Schillhof et al teaches a summation circuit 19 having multiple inputs [Fig. 3; col. 9, lines 8-28].

Regarding Claim 4, Schillhof et al teaches a logic circuit shown in Fig. 2, for selecting one or all, or combination of signals [Figs. 1, 3; col. 1, lines 37-67].

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- (i) Arends et al [US 5,909,432] , see Fig. 4 [Abstract];
- (ii) Zuqert et al [US 6,466,832 B1] teaches an automatic gain control routine [col. 18, lines 50-65]; and
- (iii) Gligoric [US 6,292,560 B1], see Figs. 2-4 [Abstract].

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Ramnandan Singh whose telephone number is (703)308-6270. The examiner can normally be reached on M-F(8:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester Isen can be reached on (703)-305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

Dr. Ramnandan Singh
Examiner
Art Unit 2644



January 8, 2004



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